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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/671,718	09/29/2003	Yuichi Ogawa	500.43154X00	9914

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BRUNDIDGE & STANGER, P.C.
1700 DIAGONAL ROAD, SUITE 330
ALEXANDRIA, VA 22314

EXAMINER	
KIM, PAUL	

ART UNIT	PAPER NUMBER
2169	

MAIL DATE	DELIVERY MODE
08/18/2009	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/671,718	OGAWA ET AL.	
	Examiner	Art Unit	
	PAUL KIM	2169	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *22 May 2009*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *21,22,25 and 26* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *21,22,25 and 26* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. This Office action is responsive to the following communication: Amendment filed on 22 May 2009.

2. Claims 21-22 and 25-26 are pending and present for examination.

Response to Amendment

3. Claims 21-22 have been amended.

4. Claims 23-24 have been cancelled.

5. Claims 25-26 have been newly added.

Claim Rejections - 35 USC § 101

6. Applicant's Amendment has been acknowledged. Accordingly, the rejections under 35 U.S.C. 101 have been withdrawn.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

8. **Claims 21-22** are rejected under 35 U.S.C. 103(a) as being unpatentable over Numata (U.S. Patent No. 5,943,669, hereinafter referred to as NUMATA), filed on 21 November 1997, and issued on 24 August 1999, in view of Mohan et al (U.S. Patent No. 6,970,881, hereinafter referred to as MOHAN), filed on 1 March 2002, claiming provisional priority to 7 May 2001, and issued on 29 November 2005.

9. **As per independent claims 21 and 22,** NUMATA, in combination with MOHAN, discloses:

A document search method executed by a document search system having a processor, an input device, a memory, and an output device, for finding a document relevant to a search condition from object documents as search objects, comprising the steps of:

acquiring a seed text which is inputted as the search condition {See NUMATA, C33:L11-16, wherein this reads over "a query is first input by means of query input section 28"} via the input device;

partitioning, by the processor, each object document into a plurality of blocks {See NUMATA, C5:L42-59, wherein this reads over "[f]undamental vector generation section 4 partitions the logical structure of the documents that were analyzed in logical structure analysis section 4 by means of the classification units that were designated by classification unit designation section 2"};

calculating, by the processor, similarity of each block of each object document to the seed text {See NUMATA, C33:L22-27, wherein this reads over "the comparison of the query vector and the composite vectors is performed"};

judging, by the processor, whether or not the calculated similarity of each block satisfies a predetermined condition {See NUMATA, C2:L56-66, wherein this reads over "the degree of similarity between the query and chapter headings, as well as the degree of similarity between the query and paragraphs, are calculated respectively"};

calculating, by the processor, as an inclusion degree for each object document, a ratio of the number of blocks thereof that are judged as satisfying said predetermined condition to the total number of the plurality of blocks {See MOHAN, C16:L22-29, wherein this reads over "Concept presence ratio (R_c): This is the ratio of number of times a concept occurs in an object (n_c) over the total of all the concepts that occur in an object (n_{tc})"} resulting from the partitioning of the object document {See NUMATA, C5:L46-48, wherein this reads over "classification unit designation section 2 performs the designation of the classification units as 'documents', 'chapters', 'sections', 'paragraphs', and the like"}; and

calculating, by the processor, a total similarity of each unpartitioned object document as a whole to the seed text {See NUMATA, C5:L46-48, wherein this reads over "classification unit designation section 2 performs the designation of the classification units as 'documents', 'chapters', 'sections', 'paragraphs', and the like"; and C10:L31-36, wherein this reads over "when the composite vector corresponding to each structural element of the classification unit are generated, composite vector maintenance section 7 attaches the corresponding composite vectors to each structural element of the classification unit"}; and

outputting, via the output device, a search result of inputting the search condition {See NUMATA, C20:L61-67, wherein this reads over "a constant degree of similarity is established as the threshold value when there is practical use, and structural elements of retrieval units of a degree of similarity below the threshold value are made so as to not be displayed"}, the search result including an identifier of each object document, the calculated inclusion degree of each document to the seed text {See NUMATA, C2:L56-66, wherein this reads over "the degree of similarity between the query and chapter headings, as well as the degree of similarity between the query and paragraphs, are calculated respectively"}, and the calculated total similarity of each unpartitioned object document as a whole to the seed text {See NUMATA, C10:L31-36, wherein this reads over "when the composite vector corresponding to each structural element of the classification unit are generated, composite vector maintenance section 7 attaches the corresponding composite vectors to each structural element of the classification unit"}.

While NUMATA may fail to expressly disclose that an inclusion degree comprises a ratio of the number of blocks thereof that are judged as satisfying a predetermined condition to the total number of the plurality of blocks, MOHAN discloses that calculation of a ration which comprises the number of time a concept occurs in an object. Accordingly, the combination of NUMATA and MOHAN would disclose an invention wherein the frequency of each query term, or concept, in a section of the document such as the abstract or main body (i.e. the number of blocks that are judged as satisfying a predetermined condition) may be used in the calculation of a ratio wherein said frequency of query term, or concept, would be compared to the total number of concepts, or terms, in the object (i.e. the total number of the plurality of blocks in the partitioned object document). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the above invention suggested by NUMATA by combining it with the invention as disclosed by MOHAN.

One of ordinary skill in the art would have been motivated to do this modification so that the calculated inclusion degree may be used in determining the relative similarity of the seed text to the object document.

10. **Claims 25-26** are rejected under 35 U.S.C. 103(a) as being unpatentable over NUMATA, in view of MOHAN, and in further view of Inaba et al (USPGPUB No. 2003/0004928, hereinafter referred to as INABA), filed on 3 September 2002, and published on 2 January 2003.

11. **As per dependent claims 25-26,** NUMATA, in combination with MOHAN and INABA, discloses:

The document search method according to claim 21, further comprising the steps of:

providing an interface for setting a threshold value for said inclusion degree and a threshold value for said total similarity {See INABA, [0239], wherein this reads over "each delivery threshold value may be initialized to a value determined by a manager or may be set to a value inputted by user"}; and

outputting via the output device only those object documents in the form of a list of search results that satisfy one or both of said threshold values {See NUMATA, C33:L17-27, wherein this reads over "the comparison of the query vector and the composite vectors is performed (step S44 of FIG. 17) and is displayed on display section 31 along with the structural elements of the corresponding retrieval units in descending order of the degree of similarity between the composite vectors and the query vector"}.

While the combination of NUMATA and MOHAN may fail to expressly disclose the method step of providing an interface for setting a threshold value for said degree and a threshold value for said similarity, INABA discloses a method wherein a user may set the delivery threshold value for determining which texts to deliver. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the above invention suggested by NUMATA and MOHAN by combining it with the invention as disclosed by INABA.

One of ordinary skill in the art would have been motivated to do this modification so that the user may further limit the search results according to a preset threshold value.

Response to Arguments

12. Applicant's arguments filed 22 May 2009 have been fully considered but they are not persuasive.

a. Rejections under 35 U.S.C. 103

Applicant asserts the argument that NUMATA fails to disclose "an indication of both a total similarity of the object document as a whole to the seed text and an inclusion degree representing local similarity." See Amendment, page 7. The Examiner respectfully disagrees. It is noted that NUMATA discloses an invention wherein classification units may be designated as "documents", "chapters", "sections", "paragraphs", and the like. Furthermore, NUMATA discloses that a composite vector is generated for each corresponding structural element of each classification unit. Accordingly, wherein a composite vector may be generated for the classification unit of a document (i.e. the object document as a whole) and of a paragraph (i.e. a block), it would have obvious to one of ordinary skill in the art that NUMATA would indeed read upon the claim limitations as recited. That is, wherein the composite vector is taken for the classification unit of a document, said document is taken as a whole and is unpartitioned. Accordingly, wherein composite vectors may be taken of a plurality of various classification units, it would have been obvious to one of ordinary skill in the art that NUMATA, in combination with

MOHAN, would disclose an invention wherein a similarity comparison may be taken for a unpartitioned document as whole and for a plurality of blocks.

For the aforementioned reasons above, the claim rejections under 35 U.S.C. 103 are maintained.

Conclusion

13. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to PAUL KIM whose telephone number is (571)272-2737. The examiner can normally be reached on M-F, 9am - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tony Mahmoudi can be reached on (571) 272-4078. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Tony Mahmoudi/
Supervisory Patent Examiner, Art Unit 2169

Paul Kim
Examiner, Art Unit 2169
TECH Center 2100

/pk/